UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/715,753	11/17/2000	Jerry L. Mizell	NORT0080US(12419RRUS01U)	6962

21906 7590 03/29/2005	EXAMINER
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ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	09/715,753	MIZELL ET AL.
Office Action Summary	Examiner	Art Unit	
	Christine Ng	2663	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _16 February 2005_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _2-18,20-27 and 37-43_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _25-27_ is/are allowed.

6)☒ Claim(s) _2,3,5-15,17,21,22,37,38 and 40-43_ is/are rejected.

7)☒ Claim(s) _4,16,18,20,23,24 and 39_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _17 November 2000_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Allowable Subject Matter

1.   The indicated allowability of claims 2, 3, 5-15, 17, 21, 22, 37, 38 and 40-43 is

withdrawn in view of the newly discovered reference(s) to U.S. Patent No. 5,278,890 to

Beeson et al and U.S. Patent No. 6,490,259 to Agrawal et al. Rejections based on the

newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 2, 3, 5, 15, 17, 22 and 38 are rejected under 35 U.S.C. 102(b) as being

anticipated by U.S. Patent No. 5,278,890 to Beeson et al.

Referring to claims 2 and 38, Beeson et al disclose in Figure 6 a method of

establishing communications between a base station (BSS) and a system controller

(MSC) over a network, comprising:

Identifying a plurality of paths (dashed lines) in the network, each path defined by

an address (local reference number) in the base station and an address (local reference

number) in the system controller.

Selecting one of the plurality of paths to communicate data associated with a

given mobile station (Figure 1, MS 120).

Wherein selecting one of the plurality of paths comprises performing an implicit

negotiation in which the path is defined by a source address (local reference number) of

a message (SCCP message) communicated by the base station and by a source

address (local reference number) of a message (SCCP message) communicated by the

system controller. A local connection identifier is associated with each distinct

connection and the connection information is shared through the use of SCCP local

reference numbers. Each end will send its local reference number to confirm the setup

of the connection, the local reference number identifying the number of a protocol

handler (PH) on which the connection resides. Refer to Column 7, lines 48-64 and

Column 9, lines 24-63.

Referring to claim 3, Beeson et al disclose in Figure 6 that performing the implicit

negotiation comprises sending and receiving messages in a session having bi-

directional data flow. Messages are sent both ways between the MSS and BSS. Refer

to Column 7, lines 48-64 and Column 9, lines 24-63.

Referring to claim 5, Beeson et al disclose in Figure 6 that the method further

comprises selecting another path by sending a message from another source address.

When one PH fails in the MSC, a backup PH is chosen to take over the connections of

the failed PH. The backup PH represents another path for connections and assigns

local reference numbers for new connections. Refer to Column 8, lines 7-42.

Referring to claim 15, Beeson et al disclose in Figure 6 a first system (MSC) for

use in a mobile communications network, comprising:

A communications module (WSM 610) adapted to communicate over a packet-switched network (Column 6, lines 30-37) coupled to a second system, the first system (MSC) being one of a base station and a system controller and the second system (BSS) being another one of the base station and the system controller. Refer to Column 12, lines 19-22.

A storage element (WDSM 604) containing one or more first addresses (local reference numbers of PHs) associated with the first system. Refer to Column 7, lines 48-64 and Column 12, lines 19-22.

A control module (PH) adapted to select one of the plural paths (dashed lines) over the packet-switched network, each path defined by one address (local reference number) associated with the first system and one address (local reference number) associated with the second system. Refer to the rejection of claims 2 and 38.

The control module (PH) adapted to select one of plural paths over the packet-switched network by performed an implicit negotiation in which a path is defined by a source address (local reference number) of a message (SCCP message) communicated by the first system and by a source address (local reference number) of a message (SCCP message) communicated by the second system. Refer to the rejection of claims 2 and 38.

Referring to claim 17, Beeson et al disclose that the first system comprises the base station BSS. The BSS is associated with the MSC.

Referring to claim 22, Beeson et al disclose that the control module (PH) comprises a load sharing task to select different paths for different mobile stations. By

7

allowing for a backup PH to every PH, this reduces the overload on the backup PH.

Refer to Column 8, lines 35-40.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,278,890 to Beeson et al in view of U.S. Patent No. 6,711,143 to Balazinski

et al.

Beeson et al do not disclose the sending the message comprises sending a

UNITDATA message.

Balazinski et al disclose that messaging can be performed by using a

UNITDATA PDU. Refer to Column 5, lines 53-56. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to include

that sending the message comprises sending a UNITDATA message; the motivation

being that UNITDATA is a standard messaging protocol.

6.   Claims 7, 9, 10 and 13 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent No. 5,278,890 to Beeson et al.

Referring to claim 7, Beeson et al do not specifically disclose selecting another

path by sending a change-route request. However, Beeson et al disclose that when a

PH fails, a spare PH is switched into its position and connected to the sources and

destinations of messages for that PH. The next ascending PH transmits to the spare

PH a list of reference numbers of stable connections from the failed PH, which the next

ascending PH controls for the failed PH (change-route request), while the spare PH

takes over new connections. Refer to Column 8, lines 7-28.

Referring to claim 9, Beeson et al disclose that selecting another path by sending

the change-route request is part of an explicit path negotiation. Refer to Column 8, lines

7-42.

Referring to claim 10, Beeson et al disclose in Figure 6 a method of establishing

communications between a base station (BSS) and a system controller (MSC) over a

network, comprising:

Identifying a plurality of paths (dashed lines) in the network, each path defined by

an address (local reference number) in the base station ad an address (local reference

number) in the system controller.

Selecting one of the plurality of paths to communicate data associated with a

given mobile station (Figure 1, MS 120).

Selecting another path by sending a change-route request. Refer to the rejection

of claim 7.

Beeson et al do not specifically disclose that selecting another path by sending a

change-route request is performed during a session having unidirectional data flow

between the base station and the system controller. However, when the change from

the failed PH to the spare PH takes place, the spare PH accepts new SCCP message

connection requests for that PH, which is a unidirectional data flow.

Referring to claim 13, Beeson et al disclose in Figure 6 a method of establishing

communications between a base station (BSS) and a system controller (MSC) over a

network, comprising:

Identifying a plurality of paths (dashed lines) in the network, each path defined by

an address (local reference number) in the base station ad an address (local reference

number) in the system controller.

Selecting one of the plurality of paths to communicate data associated with a

given mobile station (Figure 1, MS 120).

.Selecting another path by sending a change-route request. Refer to the rejection

of claim 7.

Wherein sending the change-route request comprises sending the change-route

request using a new source address (from the spare PH), and wherein selecting the

other path is based on the new source address. The spare PH "assigns local reference

numbers for new connections that have the same logical PH number as the connections

formerly served by the failed PH". Refer to Column 8, lines 7-42.

8.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,278,890 to Beeson et al in view of U.S. Patent No. 5,974,036 to Acharya et

al.

Beeson et al do not disclose that the change-route request comprising sending a

GPRS NS-CHANGEROUTE request.

Acharya et al do not specifically disclose a GPRS NS-CHANGEROUTE

request. However, Acharya et al disclose that a base station sends a RT_CHANGE signal to a first switch to establish a new connection to another switch during handover. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the change-route request comprises sending a GPRS NS-CHANGEROUTE request, the motivation being that there needs to be some type of signal to notify the system performing the rerouting of when rerouting is needed.

7.   Claims 11 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,278,890 to Beeson et al in view of U.S. Patent No. 6,469,994 to Ueda et al.

Referring to claim 11, Beeson et al do not disclose sending the change-route request comprises sending a request containing an identifier of the mobile station.

Ueda discloses in Figure 5 that sending the change-route request comprises sending a request containing an identifier of the mobile station. "To each of packet data transferred from the terminals, a user ID to indicate each property is added" (Column 5, lines 54-55). The base station (Element 20) requests for the packet switching office 30 to set one of the shared channels into the leased mode and to assign it to terminal 10c, the terminal that is requesting a route change. Refer to Column 5, line 58 to Column 6, line 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include sending the change-route request comprises sending a request containing an identifier of the mobile station, the motivation being so that the module receiving the change-route request can identify which terminal needs to change routes so that it can assign the channel accordingly.

Referring to claim 43, refer to the rejection of claim 11 and 13.

8.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,278,890 to Beeson et al in view of U.S. Patent No. 6,469,994 to Ueda et

al, and in further view of U.S. Publication No. 2001/0033563 to Niemela et al.

Beeson et al do not disclose that the identifier comprises a GPRS TLLI.

Niemela et al disclose that a data packet is associated with a TLLI. Refer to

Section 0011. Therefore, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to include that the identifier comprises a GPRS TLLI,

the motivation being that a TLLI is assigned to a mobile station during a GPRS session

and is reassigned to another mobile station after the GPRS session is over, thereby

making addressing efficient.

9.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,278,890 to Beeson et al in view of U.S. Patent No. 5,487,065 to Acampora

et al.

· Beeson et al do not disclose that the method further comprises disabling an

address; and sending a change-route request containing the disabled address to

change a path for each mobile station assigned a path defined by the disabled address.

Acampora et al disclose in Figure 6 disabling an address (first and third rows of

table 114); and sending a change-route request (control message) containing the

disabled address (first and third rows of table 114) to change a path (switch from path

120 to 121) for each mobile station assigned a path defined by the disabled address

(first and third rows of table 114). The control message tells the switch to enable

connection 121 (enable second and fourth rows of table 114) and disable connection

120 (disable first and third rows of table 114). Refer to Column 9, lines 20-33.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to include the method further comprises disabling an address; and

sending a change-route request containing the disabled address to change a path for

each mobile station assigned a path defined by the disabled address, the motivation

being that this facilities rerouting of data packets through the use of a single control

message.

10.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,278,890 to Beeson et al in view of U.S. Publication No. 2001/0033563 to

Niemela et al.

        Beeson et al do not disclose that each path is further defined by a UDP port of

the first system and a UDP port of the second system.

        Niemela disclose in Figure 2 each path is further defined by a UDP port of

the first system (BSS 122) and a UDP port of the second system (SGSN 124). Refer to

Section 0035. Therefore, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to include that each path is further defined by a UDP

port of the first system and a UDP port of the second system, the motivation being that

UDP is a communications protocol that does not provide the service of dividing a

message into packets and reassembling it at the other end, thereby saving processing

time.

11.   Claims 37, 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent No. 5,278,890 to Beeson et al in view of U.S. Patent No. 6,490,295 to

Agrawal et al.

Referring to claim 37, Beeson et al disclose in Figure 6 establishing

communications over a network between a base station (BSS) and a system controller

(MSC) and a first node (PH) to:

Identify a plurality of paths (dashed lines) in the network, each path defined by an

address (local reference number) in the base station and an address (local reference

number) in the system controller.

Select one of the plurality of paths to communicate data associated with a give

mobile station (Figure 1, MS 120).

Send a message to decommission an address of one of the base station and the

system controller. When a PH fails, the spare PH takes over the connections of the

failed PH and deactivates the local reference number of the failed PH, since the local

reference number contains the identifications of the PH upon which connections reside.

Refer to Column 8, lines 1-42.

Beeson et al do not disclose that the addresses are IP address.

Agrawal et al disclose in Figure 1A that a BS and BSC are assigned unique IP

addresses which is utilized by the IP layer. Refer to Column 6, lines 38-46. Therefore,

it would have been obvious to one of ordinary skill in the art at the time the invention

was made to include that the addresses are IP address, the motivation being so that the

BS and BSC can communication in an IP environment.

Referring to claim 40, refer to the rejection of claim 13.

Referring to claim 41, Beeson et al disclose that the first node selects another

path for each mobile station assigned a path defined by the decommissioned address

by sending a change-route request containing a different IP address. The spare PH

"assigns local reference numbers for new connections that have the same logical PH

number as the connections formerly served by the failed PH". Refer to Column 8, lines

7-42 and the rejection of claim 7.

12.   Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,278,890 to Beeson et al in view of U.S. Patent No. 6,490,295 to Agrawal et

al, and in further view of U.S. Patent No. 6,469,994 to Ueda et al. Refer to the rejection

of claim 11.

Allowable Subject Matter

13.   Claims 25-27 are allowed.

14.   Claims 4, 16, 18, 20, 23, 24 and 39 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

Conclusion

15.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Christine Ng whose telephone number is (571) 272-

3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng ω
March 16, 2005

RICKY NGO
PRIMARY EXAMINER   3/17/05